Fusion3

F200 3D Printer

CONSUMABLE ITEMS

Revision 6/30/2025

F200 3D PRINTER: CONSUMABLE ITEMS

In regards to the Fusion3 F200 3D printer, the following items are considered consumables:

- ANVIL print head tubes
- ANVIL print head heater cartridges
- ANVIL print head temperature sensors
- PEI Print surfaces
- Filament feed tubes
- Print chamber filter elements (HEPA+carbon)
- Print head scrub pads
- PTC fittings

These items are not expected to last the life of the printer and are not covered under the machine's standard warranty.

Many of these items have a defined replacement schedule and maintenance reminders built into the system interface of your 3D printer. When an item is due for replacement, you will see a notification on the screen.

ANVIL PRINT HEAD TUBES

The core of the ANVIL print head is a disposable easily-replaced thin-wall tube. The print head is designed so that in the event of a print head jam, or poor print performance, you can remove the tube, throw it away, and install a new one.

When To Replace

- Not replaced on a maintenance schedule
- Replace if jammed and you cannot recover it
- Replace if printing performance degrades

For More Information, please refer to the Documentation Module, “ANVIL - Changing Print Head Tubes” HERE

ANVIL PRINT HEAD HEATER CARTRIDGES

ANVIL print head heater cartridges are a 24VDC 65W heater. While heater cartridges are simple devices and are fairly robust, the environment they live in is a hostile one. So we don't expect them to last forever.

When To Replace

- Not replaced on a regular maintenance schedule. If you wish to replace prophylactically, consider replacing once a year in high-use environments.
- Replace if you and/or Fusion3 Customer Support team determine there is a problem with the component.
- Replace if the component becomes too covered in debris or melted filament to be easily/precisely installed & removed from the ANVIL print head.

For More Information, please refer to the Documentation Module, “ANVIL - About the ANVIL Print Head” HERE

ANVIL PRINT HEAD TEMPERATURE SENSORS

The temperature sensor in ANVIL print heads is a PT1000, which is more reliable than a simple thermistor. That said, we still don't expect a sensor to last forever.

Unlike thermistors, PT1000 sensors have an easily-detected and fairly binary failure mode: they work, or they don't. (Thermistors can exhibit a period of degraded performance where they "work" but don't report the correct temperatures.) Therefore, it's **not** necessary to replace these sensors on a schedule or as a preventative maintenance item.

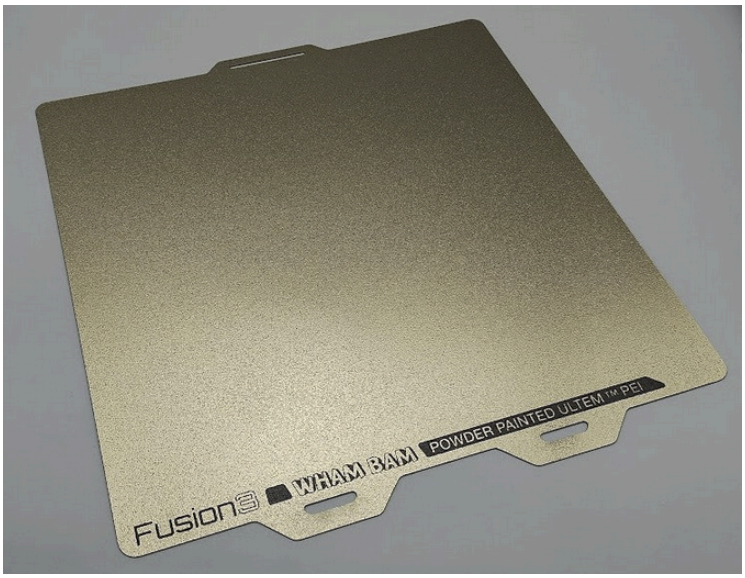
When To Replace

- Not replaced on a maintenance schedule. If you wish to replace prophylactically, consider replacing once a year in high-use environments.
- Replace if you and/or Fusion3 Customer Support team determine the sensor is faulty.

- Replace if the component becomes too covered in debris or melted filament to be easily/precisely installed & removed from the ANVIL print head.

For More Information, please refer to the Documentation Module, “ANVIL - About the ANVIL Print Head” HERE

PEI PRINT SURFACES

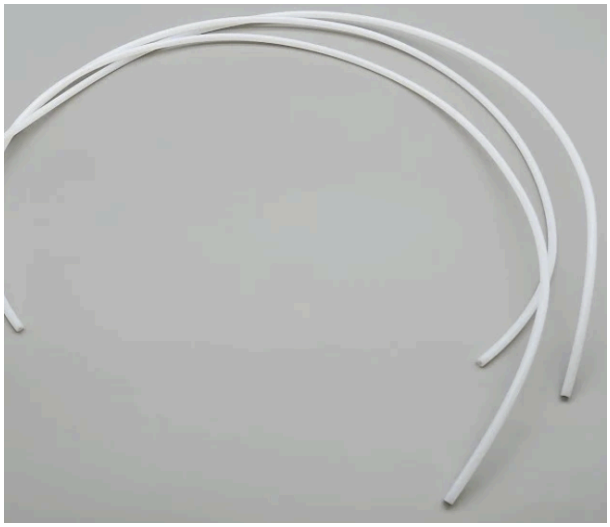


The PEI flex print surface is what you actually print on. While robust, they're not immune to damage and may need to be replaced regularly, depending on the materials you print and environmental factors.

When To Replace

- Not replaced on a maintenance schedule.
- If the steel sheet becomes permanently bent, creased, warped, etc. If it won't lie flat on a desk, please replace it.
- If the print surface becomes excessively scored, scratched, or damaged in a way that prevents reliable print adhesion.

FILAMENT FEED TUBES



F200 does not use a bowden (remote extruder) filament feed system. So the main filament feed tube is not under high mechanical load and therefore does not need to be replaced as often as other Fusion3 printers.

When To Replace

- Not replaced on a maintenance schedule.
- Replace if the tube becomes bent or creased.
- Replace if you noticed abrasion on the outside of the tube where it rubs against another part of the printer.

PRINT CHAMBER FILTER

The HEPA and carbon filter elements must be replaced regularly to maintain correct performance and effective filtration of the exhaust air from the print chamber.

When To Replace:

- Replaced on a maintenance schedule - notification will appear when due for replacement.
- Note that the carbon and HEPA elements have independent timers.

FAQ:

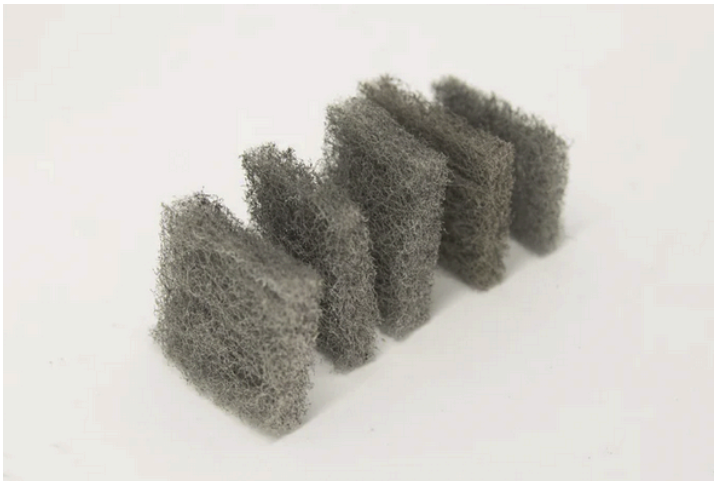
Your replacement schedule seems overly aggressive. What happens if I don't replace the filter elements on schedule? Will my warranty be voided?

Failure to replace the filter elements on schedule may adversely impact the filter's ability to clear particulates from the exhaust stream, causing additional odors and a reduction in your expected benefits of using filters to reduce the impacts of emissions from different materials printed. As always, please review the safety data sheets of any materials you choose to print and take appropriate precautions before printing.

Failure to replace the filter elements on schedule may cause a reduction in airflow in your printer, which may in turn cause damage to components that would not be covered under your warranty.

PRINT HEAD SCRUB PADS

The print head scrub pad is used to clean the tip of the print head nozzle during the probe offset calibration procedure. It must be relatively clean and fresh in order to do its job effectively.



When To Replace:

- Replace on a maintenance schedule - notification will appear when due for replacement
- Replace if you notice excessive debris in the pad.

For More Information, please refer to the Documentation Module, “MAINTENANCE - SCRUB PAD REPLACEMENT” HERE

FAQ:

Your replacement schedule seems overly aggressive. What happens if I don't replace the scrub pad on schedule? Will my warranty be voided?

In most cases, deferring scrub pad replacement will not cause a warranty issue. However, this is not a blanket statement. If it's determined that proper maintenance of the scrub pad was overlooked and contributed to 3D printer damage, which may not be covered under your Fusion3 2 Year Limited Warranty.

If your nozzle offset calibration process is working fine, then it's probably fine to extend the life or defer replacing the scrub pad on schedule. Especially if you are doing fewer long prints vs many short prints, the replacement schedule may not be a good fit for your application. As with the feed tube replacement, Fusion3 Support will ask you to catch up on deferred maintenance (such as scrub pad replacement) at the first sign of issues.

PTC FITTINGS

The PTC (push to connect) fittings are used to retain the bowden tube and bed probe tube. These fittings make removing or replacing a tube quick and easy. The downside is they can become damaged if a failure in the feed system happens, and they must be replaced.

For more information: https://youtu.be/aDeVKKHEx1I?t=561

When to Replace:

- Not replaced on a maintenance schedule.
- Replace if you experience a tube blowout.
- Replace if the bowden tube slips out during operation.
- Replace if a fresh/new bowden tube has play in the fitting.